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10/045,017	01/15/2002	Yoshitaka Terao	P56664	7888

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EXAMINER

MACCHIAROLO, PETER J

ART UNIT

PAPER NUMBER

2875

DATE MAILED: 04/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/045,017

Applicant(s)

TERAO ET AL. 

Examiner

Peter J Macchiarolo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 12-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 19-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-21 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Election/Restrictions*

1. Restriction to one of the following inventions is required under 35 U.S.C.121:
  - I. Claims 1-11 and 19-21 are drawn to a plasma display, classified in class 313, subclass 586.
  - II. Claims 12-18, drawn to a method for manufacturing a plasma display, classified in class 445, subclass 24.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions of Group I and Group II are related as process of making and product made.

The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05 (f)). In the instant case the product as claimed can be made by a different process such as forming the main barrier ribs and electrode ribs in two separate steps instead of simultaneously.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Robert Bushnell on April 3, 2003, a provisional election was made with traverse to prosecute the invention of a plasma display according to claims 1-11, and 19-21. Affirmation of this election must be made by applicant in replying to this Office action. Claims 12-18 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

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5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Priority***

6. Receipt of the claim for foreign priority is acknowledged.

***Information Disclosure Statement***

7. The information disclosure statement (IDS) submitted on January 15, 2002 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

***Specification***

8. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

9. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The following title is suggested:  
"Plasma display panel having specific rib configuration."

***Drawings***

10. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the relative heights of the second and third dielectric layers as recited in Claim 4 and the plurality of main and electrode lattice walls as recited in Claim 19 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.
11. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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13. Claims 1-11 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komaki et al (USPN 6,236,160; "Komaki") in view of Kaake et al (USPN 6,307,318; "Kaake").

14. In regards to claims 1 and 19, Komaki discloses in figures 3 and 7, a first (1) and second (2) substrate opposing one another; a plurality of first electrodes (3b) formed on a surface of the first substrate facing the second substrate, and a first dielectric layer (5) covering the first electrodes, a plurality of electrode barrier ribs/main lattice walls (12) integrally formed on a surface of the second substrate facing the first substrate which define a plurality of discharge cells (11). Komaki further discloses a plurality of electrode barrier ribs/electrode lattice walls (9) formed on the second substrate between the main barrier ribs and phosphor layers (10) and a discharge gas (Xe, column 6 line 46) provided in the discharge cells.

15. Komaki is silent to a second electrode and a second dielectric layer being formed on a distal end of each of the electrode barrier ribs/electrode lattice walls.

16. However, Kaake teaches in figure 14 and column 2, lines 47-50 and column 3 lines 60-61, that a second electrode (92) and a second dielectric layer (94) may be formed on a distal end of the barrier ribs, and this configuration provides an improved back glass substrate for a plasma display panel.

17. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the plasma display panel of Komaki including the electrode and dielectric layer structure of Kaake, since Kaake teaches that this configuration provides an improved back glass substrate for a plasma display panel.

18. In regards to claims 2-3, and 20, Komaki and Kaake teach all of the recited limitations of claims 1 and 19 (above).
19. Komaki is silent to the exact height of the dielectric layers.
20. However, Kaake teaches in figure 14 that the second dielectric layer is formed on the second electrode which is formed the distal end of each of the barrier ribs. Kaake further teaches in figures 13-14 that a dielectric layer may be formed on every barrier rib using a method that will establish a height of an upper surface of the second dielectric layer and a third dielectric layer to be substantially the same, which is required to prevent the formation of gaps between discharge cells of different phosphors, thereby preventing erroneous emitted light.
21. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the plasma display panel of Komaki including the dielectric layer structure of Kaake, since this configuration prevent the formation of gaps between discharge cells of different phosphors, thereby preventing erroneous emitted light.
22. In regards to claims 4 and 21, Komaki and Kaake teach all of the recited limitations of claims 1 and 19 (above).
23. Both Komaki and Kaake are silent to the height of an upper surface of the third dielectric layer being greater than a height of an upper surface of the second dielectric layer.
24. However, Komaki teaches in figure 7 that the discharge cells of the same phosphor share a common electrode, which is known to reduce the overall driving voltage.
25. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the plasma display panel of Komaki including the electrode

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and dielectric layer structure of Kaake (above), and further including the height of an upper surface of the third dielectric layer being greater than a height of an upper surface of the second dielectric layer, since this configuration would also allow the discharge cells of the same phosphor to share a common electrode, which will reduce the driving voltage.

26. In regards to claims 5-10, Komaki and Kaake teach all of the recited limitations of claim 1 (above).

27. Komaki teaches in figure 7 that each discharge cell is divided into two partitioned discharge cells, and the partitioned discharge cells include concave surfaces, and a width of each of the partitioned discharge cells are formed to correspond to a color displayed by the particular partitioned discharge cell.

28. Komaki is silent to the second electrode being formed on a distal end of each of the main barrier ribs and electrode barrier ribs.

29. However, Kaake teaches in figure 14, that one of the second electrodes (92) is formed on a distal end of each of the main barrier ribs (40) and the electrode barrier ribs (40). Kaake further teaches in figure 1-5 and column 1 lines 65-67, that the barrier ribs are formed integrally with the second substrate, and this configuration allows for an improved method for making a back glass substrate for a plasma display panel.

30. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the plasma display of Komaki, including the electrode configuration of Kaake, since Kaake teaches that this configuration allows for an improved method for making a back glass substrate for a plasma display panel.



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31. In regards to claim 11, Komaki and Kaake teach all of the recited limitations of claim 10 (above).

32. Both Komaki and Kaake are silent to the partitioned discharge cells displaying blue include a larger width than the portioned discharge cells displaying green, and the portioned discharge cells displaying green have a larger width than the portioned discharge cells displaying red.

33. However, it is well known in the art that changing the discharge cells widths' so that the blue cells are larger in width than the green cells, and the green cells are larger in width than the red cells, will allow for proper brightness ratios.

34. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the plasma display panel of Komaki with the electrode configuration of Kaake, including the blue discharge cells being wider than the green discharge cells, and the green discharge cells being wider than the red discharge cells, since this configuration is well known in the art to allow for proper brightness ratios.

### *Conclusion*

35. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

36. U.S. Patent 6,456,007 to Rye et al. discloses a plasma display panel with a dielectric layer and an electrode on a distal end of a barrier rib.

37. U.S. Patents 5,384,514 to Kim, 5,041,759 to Kwon et al, and 4,423,352 to Miyazaki et al disclose plasma display panels that provide motivation and can be interpreted to read on

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Applicant's claims. However, the Examiner is not relying on these references in this Office Action.

38. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J Macchiarolo whose telephone number is (703) 305-7198.

The examiner can normally be reached on 7.30 - 4:30, M-F.

39. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (703) 305-4939. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

40. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

pjm  
April 8, 2003

  
Sandra O'Shea  
Supervisory Patent Examiner  
Technology Center 2800